et No.: GR 97 P 1593

# CERTIFICATION OF FACSIMILE TRANSMISSION

by contribution of the Patent and mark Office fax number 703 305 3431 on the date shown below.

D. J. J.

May 17, 2002

Date

# HE UNITED STATES PATENT AND TRADEMARK OFFICE

icant

Andreas Lenniger et al.

ic. No.

09/436,598

November 9, 1999

Power Semiconductor Module With Ceramic Substrate

iiner

David E. Graybill

Art Unit:

2814

# 'LEMENTAL RESPONSE

Commissioner of Patents and Trademarks, sington, D. C. 20231

MAY 17 2002

: i)

lemental to the preliminary amendment and the Request for Continued Examination itted on March 4, 2002, enclosed please find an executed Declaration under 37 C.F.R. to overcome the anticipation rejection of claims 1-7. The declaration specifically s reference to claim 1 as amended in the aforesaid preliminary amendment. The tors clearly state in the enclosed Declaration under 37 C.F.R. 1.132 that the inventive fit feature is not inherent to applicants' admitted prior art.

asideration of the application and the allowance of claims 1-7 are respectfully solicited.

ectfully submitted.

Gregory L. Mayback Reg. No. 40,719

May 17, 2002

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#### CERTIFICATION OF FACSIMILE TRANSMISSION

reby certify that this paper for Serial No. 09/436,598 is being faceimile mitted to the Patent and Trademark Office fax number (703) 305-3481 on late shown below.

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5/17/02

### THE UNITED STATES PATENT AND TRADEMARK OFFICE

.icant : Andreas Lenniger et al.

.ic. No. : 09/436,598

:d : November 9, 1999

.e : Power Semiconductor Module With Ceramic

Substrate

uiner : David E. Graybill

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#### ARATION in accordance with 37 CFR 1.132

MAY 17 2002

COMMISSIONER OF PATENTS AND TRADEMARKS, INGTON, DC 20231

rder to assist in the prosecution of this application and traversal of the rejection of the claims by the Examiner, Dr. Andreas Lenninger, Alfred Kember, and Gottfried er, do hereby declare as follows:

tre citizens of Germany, and we are the named inventors who the invention of this application.

andreas Lenninger, am a trained engineer specializing in strical engineering. I received the degrees of Dipl.-Ing. Dr. Ing. at the Ruhr University of Bochum in 1988 and respectively. Since 1994, I have been employed as a ager for process engineering.

indreas Lenninger, am the inventor or a co-inventor of U.S. int No. 5,847,286 among others.

Alfred Kember, am a trained technical manager. Since 1961, we been employed as a manager in industrial engineering.

Hottfried Ferber, am a trained technical engineer sializing in mechanical engineering. Since 1961, I have employed as a mechanical designer.

nave read the specification and claims of this application,

Office action dated August 28, 2000, the response therato

d December 29, 2000, the final Office action dated March

001, and the second final Office action dated December 4,

in which claims 1 to 7 were finally rejected under

ion 102(b) as unpatentable over applicants' admitted prior

Arguments explaining why the present claims are believed

Respected to the total colors of the first of

efine subject matter that is not taught or suggested by prior art are set forth herein.

### ussion

## Rejection of Claims 1 to 7 under 35 U.S.C. § 102(b)

ages 2 to 3 of the above-identified Office action, the iner rejected claims 1 to 7 as being fully anticipated by icants' admitted prior art under 35 U.S.C. § 102. In the ion 102 rejection, the Examiner states: "the product of icant's admitted prior art inherently possesses the acteristics imparted by" the feature "terminals pressed into housing element openings." Final Office action at 3.

isagree with the Examiner and agree with the analysis set h in the Response filed December 29, 2000, and conclude the press-fitted feature of the invention of the instant ication is not inherent.

m 1 calls for, inter alia, Claim 1 calls for, inter alia, wer semiconductor module, including:

semiconductor components;

a plastic housing having an interior and connecting element openings formed therein;

a substrate disposed in the plastic housing defining a housing base of the plastic housing, the substrate containing a ceramic plate having a top side and a bottom side with a top metallization layer disposed on the top side and a bottom metallization layer disposed on the bottom side, the top metallization layer facing the interior of the plastic housing being patterned in order to form interconnects and equipped for and receiving the semiconductor components;

terminal elements for providing external terminals, the terminal elements press-fitted into the connecting element openings in the plastic housing; and

wires bonded to the terminal elements and to the semiconductor components.

nave undertaken a thorough review of the specification of instant application and the prior art and state that the intion of the instant application is not inherent to icants' admitted prior art.

described in the last line of claim 1 and page 7, lines 16
15, of the specification of the instant application, the
27 module according to the invention of the instant
28 dication differs from the prior art in that the terminals
29 dioned in claim 1 are press-fitted into the openings of the
30 sing element.

prior art cited in the introductory specification and the or art references cited by the Examiner each describe power cles in which the terminal pins are injection-molded with a stic during the production process. The disadvantage reof is, as described on page 2, lines 1 to 13, of the :ification of the instant application; that the terminal : and the plastic have different expansion coefficients so gaps between the plastic and the terminal pins can arise r the plastic material cools off. Such gaps lead to loose inal pins. Loose terminal pins is a disadvantage that is ded with the power module according to the invention of instant application because the terminal pins of the ntion are not injection-molded with plastic. Rather, they "press-fitted into . . . cpenings" of the power module ing during production. Such a process is not inherent to icants' admitted prior art.

reby declare that all statements made herein of my own ledge are true and that all statements made on information

belief are believed to be true, and further that these tements were made with the knowledge that willful false tements and the like so made are punishable by fine or disconment or both, under Section 1001 of Title 18 of the sed States Code and that such willful false statements may pardize the validity of the application or any patent led thereon.

30-

ied:

Dr. Andreas Lenninger

:: 08-05-2009

ied:

Alfred Kember

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Gottfried Ferber

The COPY REC: VED

MAY 17 2002

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